



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,440	10/17/2002	Ronald Hugh Miller	201-1476 FAM	8673
28549	7590	04/13/2004	EXAMINER	
KEVIN G. MIERZWA ARTZ & ARTZ, P.C. 28333 TELEGRAPH ROAD, SUITE 250 SOUTHFIELD, MI 48034			MANCHO, RONNIE M	
		ART UNIT		PAPER NUMBER
				3663

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/065,440	MILLER ET AL.	
Examiner Ronnie Mancho	Art Unit 3663	MC	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 October 2002.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date 2. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: The applicant is advised to update the information on the first paragraph of the specification, page 1 to indicate that serial # 09/683603 is now US patent 6609066.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-20 rejected under 35 U.S.C. 102(e) as being anticipated by Isogai et al (US 2001/0039472).

Regarding claim 1, Isogai et al disclose a method of adaptively controlling the speed of a reference vehicle having a controller comprising:

detecting a target vehicle (preceding vehicle, sections 0010, 0020);  
setting a reference vehicle headway distance indicative of a desired separation between said reference vehicle and said target vehicle (section 0010);  
receiving at said reference vehicle, target vehicle data from said target vehicle (sections 0010, 0020); and

Art Unit: 3663

modifying said reference vehicle headway distance as a function of said target vehicle data (sections 0010, 0013).

Regarding claim 2, Isogai et al disclose the method according to claim 1 wherein said target vehicle data includes a braking capability value BC\_T (deceleration of preceding vehicle, section 0013) for said target vehicle, and wherein the step of modifying includes modifying said reference vehicle headway distance as a function of said BC\_T (deceleration of preceding vehicle, section 0013).

Regarding claim 3, Isogai et al disclose the method according to claim 1 wherein said target vehicle data includes data comprising at least one of: a tire pressure value; a tire size value; a tread wear value; a tire temperature value; a vehicle weight value; target vehicle speed (sec. 0044, 0045, 0087); or a road condition value

Regarding claim 4, Isogai et al disclose the method according to claim 2 wherein modifying said reference vehicle headway distance (quickly decelerating host or controlled vehicle, section 0010, 0013) includes increasing said reference vehicle headway distance if said BC\_T (deceleration of preceding vehicle, section 0013) indicates less than an optimum braking capability.

Regarding claim 5, Isogai et al disclose the method according to claim 1 wherein said target vehicle data includes a target vehicle operator attention value (abrupt deceleration of preceding vehicle, section 0013) indicative of a level of potential target vehicle operator distraction.

Regarding claim 6, Isogai et al disclose the method according to claim 1 comprising:

determining a braking capability value BC\_R (deceleration of host or controlled vehicle; sec 0010, 0013) for said reference vehicle, and wherein said step of modifying includes modifying said reference vehicle headway distance as a function of said BC\_T and said BC\_R (relative acceleration involves BC\_R and BC\_T).

Regarding claim 7, Isogai et al disclose the method according to claim 6 wherein determining said BC\_R comprises analyzing reference vehicle data comprising at least one of:

a tire pressure value; a tire size value; a tread wear value; a tire temperature value; a vehicle weight value; reference vehicle speed (reference speed and reference acceleration are interchangeable mathematical quantities, section 0011); or a road condition value

Regarding claim 8, Isogai et al disclose the method according to claim 6 wherein modifying said reference vehicle headway distance (quickly decelerating host or controlled vehicle, section 0010, 0013) includes increasing said reference vehicle headway distance if said BC\_R indicates less than an optimum braking capability.

Regarding claim 9, Isogai et al disclose the method according to claim 7 wherein said reference vehicle data includes a reference vehicle operator attention value (abrupt deceleration of preceding vehicle, section 0013) indicative of a level of potential reference vehicle operator distraction.

Regarding claim 10, Isogai et al disclose a method of adaptively controlling the speed of a reference vehicle having a controller comprising:

detecting a target vehicle (preceding vehicle, sections 0010, 0020);  
setting a reference vehicle headway distance indicative of a desired separation between said reference vehicle and said target vehicle (section 0010);

receiving at said reference vehicle (sections 0010, 0020), a braking capability value BC\_T (deceleration of preceding vehicle, section 0013) for said target vehicle; generating a braking capability value BC\_R (deceleration of host or controlled vehicle, sec 0010, 0013) for said reference vehicle; and modifying said reference vehicle headway distance (sections 0010, 0013) as a function of said BC\_T and said BC\_R (relative acceleration involves BC\_R and BC\_T).

Regarding claim 11, Isogai et al disclose the method according to claim 10 wherein determining said BC\_R comprises analyzing reference vehicle data comprising at least one of: a tire pressure value; a tire size value; a tread wear value; a tire temperature value; a vehicle weight value; reference vehicle speed (reference speed and reference acceleration are interchangeable mathematical quantities, section 0011); or a road condition value

Regarding claim 12, Isogai et al disclose the method according to claim 11, wherein said BC\_T is generated at said target vehicle (section 0020, 0021) as a function of target vehicle data comprising at least one of: a tire pressure value; a tire size value; a tread wear value; a tire temperature value; a vehicle weight value; reference vehicle speed (reference speed and reference acceleration are interchangeable mathematical quantities, section 0011); or a road condition value.

Regarding claim 13, Isogai et al disclose the method according to claim 10 wherein said BC\_T includes a target vehicle operator attention value (sec 0013, 0018) indicative of a level of potential target vehicle operator distraction.

Art Unit: 3663

Regarding claim 14, Isogai et al disclose the method according to claim 10 wherein said BC\_R includes a target vehicle operator attention value (sec 0013, 0018) indicative of a level of potential target vehicle operator distraction.

Regarding claim 15, Isogai et al disclose the method according to claim 10 wherein modifying includes increasing said reference vehicle headway distance (quickly decelerating host or controlled vehicle, section 001, 0013) if said BC\_R indicates less than an optimum braking capability.

Regarding claim 16, Isogai et al disclose the method according to claim 10 wherein modifying includes decreasing said reference vehicle headway distance (sec 0010, 0013; i.e. when the preceding or target vehicle decelerates abruptly, it decreases the distance between the host vehicle and the preceding vehicle) if said BC\_T indicates less than an optimum braking capability.

Regarding claim 17, Isogai et al disclose the adaptive cruise control system for a reference vehicle comprising:

a memory (section 0051) for storing reference vehicle data (i.e. data such as deceleration, braking data; figs. 7-10; sections 0124 to 0130);

a detection system for detecting a target vehicle (i.e. preceding vehicle, sec 0010, 0020, 0021);

a receiver receiving target vehicle data from said detected target vehicle (sec 0020); and

a controller coupled to said memory (fig. 1) for adaptively controlling a speed of said reference vehicle to maintain a reference vehicle headway distance (sec 0010) indicative of a desired separation between said reference vehicle and said target vehicle, wherein said reference

vehicle headway distance is generated as a function of said reference vehicle data (deceleration or braking data of controlled vehicle, section 0124, 0125) and said target vehicle data (i.e. deceleration of preceding vehicle, sec 0020, 0021).

Regarding claim 18, Isogai et al disclose the system according to claim 17 wherein said reference vehicle data includes a braking capability value BC\_R (deceleration of host or controlled vehicle; sec 0010, 0013) for said reference vehicle.

Regarding claim 19, Isogai et al disclose the system according to claim 18 wherein said target vehicle data (i.e. deceleration of preceding vehicle, sec 0020, 0021) includes a braking capability value BC\_T (i.e. deceleration of preceding vehicle, sec 0020, 0021) for said target vehicle.

Regarding claim 20, Isogai et al disclose the system according to claim 17 wherein said reference vehicle data includes data comprising at least one of:

a tire pressure value; a tire size value; a tread wear value; a tire temperature value; a vehicle weight value; target vehicle speed (reference speed and reference acceleration are interchangeable mathematical quantities, section 0011, 0021); or a road condition value.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following: 5594645, 6324465, 6178372, 6546327, and 6516262 all disclose an adaptive cruise control system.

***Communication***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 703-305-6318. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Black can be reached on 703-305-9707. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronnie Mancho  
Examiner  
Art Unit 3663

April 6, 2004

A handwritten signature in black ink, appearing to read "Ronnie Mancho".